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Sudden Death Syndrome and Heavy Spring Rains: Another Bad Year?

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Sudden Death Syndrome and Heavy Spring Rains: Another Bad Year?

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Soybean sudden death syndrome (SDS) is one of the most damaging diseases of soybeans in Iowa and much of the Midwest. There are two phases of this disease – a root rot phase and a foliar symptom phase. SDS will be most problematic when weather conditions are conducive for disease development during both phases. The early cool, wet weather we have seen so far in 2013 helps increase the root rot phase of the disease. This can lead to development of severe SDS later in the growing season, as was seen in 2010 in Iowa.

In a recently published journal article, several plant pathologists at Iowa State University looked at rainfall, soil moisture and soil temperature in years with SDS (e.g., 2010) vs. years with little SDS (e.g., 2011). In this study, rainfall in April and May was similar in "SDS years" to "non-SDS years." However, rainfall in June and July differed between disease years and non-disease years (Table 1). This highlights the importance of rainfall a bit later in the season to trigger the second phase of the disease. Also, soil temperature was less correlated to SDS severity compared to rainfall. The entire article is available in the Plant Health Progress Journal on the Plant Management Network.

Table 1. Average total precipitation in four years with high SDS prevalence (1993, 1998, 2008, and 2010) and five years with low SDS prevalence (2001, 2004, 2005, 2007, and 2011). Values are means of two locations: Ames (central Iowa) and Mount Pleasant (southeastern Iowa).

	Total Precipitation (cm)				
Year	April	May	June	July	August
Mean SDS year	10.4	15.1	26.3	19.5	14.7
Mean non-SDS year	8.9	15.4	11.5	8.9	12.2
30-yr Mean[x]	9.0	12.2	12.4	12.2	11.2

[x] Mean for the period of 1981 to 2010 at Ames and Mount Pleasant

One bit of good news for the 2013 season is that severe SDS usually is associated with early planting of soybeans. As many farmers are experiencing, the wet spring weather has delayed planting throughout the state. Fields with delayed planting should have less SDS develop in them. However, we have found research plots planted as late as June 15 still get SDS, so you are not completely out of the woods. SDS severity in these late

planted fields is very low, and much lower than fields planted in May.

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